

W5YI

America's Oldest Ham Radio Newsletter REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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NAB and Broadcasters Gear Up to Fight Low Power FM!

We see the increased opportunity for entry, enhanced diversity, and new program services as the principal benefits of a new low power service. (FCC Notice of Proposed Rulemaking, Mass Media Docket MM 99-25.)

The most talked about subject at the recent *National Association of Broadcasters* (NAB) convention in Las Vegas was not the coming implementation of digital TV or radio. It was the FCC's January proposal to open up the nation's low power FM airwaves to new alternative voices by allowing churches, schools and other community groups get on the air legally. They want no part of it.

NAB president, Eddie Fritts said FM broadcasters are "...very concerned that the FCC proposal may have the effect of legitimizing pirates." He also expressed concern that LPFM stations' signals would interfere with FM stations and that controversial groups (such as white-supremacists) might get low-power licenses.

Supporters say that opening up the airwaves to smaller stations will bring back the "...diversity of broadcasting voices" which has declined since the 1996 *Telecommunications Act*, lifted restrictions on ownership of media outlets. Even though there are more FM stations in operation now, there are considerably less station owners.

Fritts is not buying that consolidation in the commercial radio industry has cut down on the number of differing opinions. "Let me debunk the myth of bigness is badness. We have been able to provide more diversity than ever before." What

Fritts has not talked about, however, is the reality that the hundreds - or thousands - of new broadcast stations will siphon off their listening audience. That appears to be the unsaid principle objection ...especially if LPFM stations are permitted to accept advertising. Broadcasters depend on listener ratings as a basis for their advertising rates.

The FCC has pulled the plugs on more than 400 pirate radio stations in the past two years. Aviation uses adjacent frequencies just above the FM broadcast band at 88-108 MHz and there have even been cases where pirate FM broadcasts have interfered with air traffic control at nearby airports.

Most microbroadcasters (as they call themselves) have shut down voluntarily, but more than a hundred had to be taken off the air by court order. And some were shut down by having their stations raided and equipment confiscated. The government also has the power to impose huge fines and imprisonment of up to a year in extreme cases.

California's Steve Dunifer and his battle to keep his commercial-free Free Berkeley Radio on the air at 104.1 MHZ has become the focal point for the micropower movement. In 1993, Dunifer ignored a \$20,000 fine and refused to shut his 50-watt unlicensed station down. And when a federal judge refused to issue an injunction against him, it took the FCC more than five years to force him off

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the air. The judge also questioned the government's 20-year old policy of not licensing broadcast stations unless they run more than 100 watts.

Dunifer's position is that the "The National Association of Broadcasters and the FCC are guilty of grand theft larceny - stealing the public airwaves." The government was able last June to finally obtain an injunction against Dunifer and he is no longer on the air. (He's appealing.) But he still sells his FM broadcast radio kits from his web site at <http://www.freeradio.org/> which enable others to build low-power FM radio stations for just a few hundred dollars. And "Flea Radio Berkeley" keeps showing up on the FM airwaves from time to time.

Another unlicensed group in New York City's Greenwich Village even sued the government before the FCC came calling. They too claimed that the radio spectrum is a public forum. But the result was the same. They too fell victim to the FCC's crackdown on pirate radio broadcasters.

Low power FM broadcasting proposed

Now the FCC has responded with a proposal that could create thousands of licensed, low-tech FM radio stations from 1 watt to 1,000 watts and the NAB which represents broadcasters is indeed not happy.

The Commission's *Notice of Proposed Rulemaking* contemplates licensing one or more new classes of low-power FM (LPFM) stations in the existing FM radio band.

The three classes under consideration are 1,000-watt stations (LP1000), which would service areas within a radius of approximately nine miles; 100-watt stations (LP100), would have a range of three or four miles and even microradio stations at one to ten watts which could cover about a four square mile area.

The LP100 and micropower stations would be considered "secondary"; that is they could not cause interference to existing FM stations nor would they be protected from interference caused by these stations.

The public comment period expires on June 1st; reply comments must be in by July 1. We have been monitoring the comments as they flow into the FCC's *Electronic Comment Filing System* (ECFS.) Here is a sample:

We now find ourselves in a time when allocations are auctioned off to the very wealthiest individuals who now own hundreds of licenses, and the interests and access of the people have dwindled to nothing. Along with this came an abandoning of responsibility to local communities.

Frustration at this situation has led some to pirate broadcasting, something I do not condone but do understand in a sociological context. ...The interests of a few hundred individuals are now held as more important than the long acknowledged interests of hundreds of millions of American citizens. Clearly, some reform is necessary. The new class of low power FM broadcast licenses proposed by the commission is a step in that direction.

The reaction to this proposal by those holding existing

commercial broadcast licenses is predictable. They will ask why their investment should be challenged by those whose financial exposure isn't as great. The answer is that the pendulum has swung too far in the direction of unbridled greed... A case could be made that the megaduopolies are in violation of the spirit, if not the letter, of the antitrust statutes. ...The question arises, "Who owns the airwaves?" - James B. Mayo, WB6QPW, Wailuku, HI

I understand, or believe I understand your proposal as one designed to increase minority ownership and I am troubled by this. Why is that minorities are given opportunities in such feeble attempts. Does the FCC really think that even a 1000 watt station will be competitive or economically rewarding against the big signals? This to me smacks of the same obstacles we have been facing and dealing with historically. Give the minority person the most difficult task and when he/she fails you can feel good that at least you tried. - Alcides Vicente, Exec. VP Pamal Broadcasting, WHUD-FM, K104FM, Beacon, NY

I believe that is essential that LPFM be noncommercial in nature. The communities ...are much better served with this type of programming, however another option would be to allow commercial programming, but limit commercial air-time and stipulate certain criteria for the airing of commercials... Low Power stations can certainly survive on limited budgets, but I do not think that Underwriting is effective enough. - David Brouda

As a "mom & pop" broadcaster who has spent 37 years in this business, I am deeply concerned about low power FM. ...LPFM will do exactly the opposite that it is intended to do. If LPFM is allowed, besides the citizens of the United States, the only broadcast faction that will be severely injured is the independent or "mom & pop" broadcaster. The large big money broadcast corporations will hardly be affected. In many markets, they control half the broadcasting revenue... [They] are equipped and prepared to do whatever it takes to circumvent any threat caused by LPFM. They are attempting to do it now with the "mom & pop" broadcaster. These big money broadcast corporations will invest whatever money it takes to promote, advertise, out-program, contest and just about "drill-into-the-ground" LPFM stations that pose any threat whatsoever. ...I can assure you, Mr. Chairman, that if LPFM becomes a reality, the "mom & pop" broadcasters will be hurt the most. The very diversity that you are concerned with will be further eroded because of the FCC's condonement of LPFM. - Jim Coursolle, President - WPKR, WPCK, Oshkosh, WI.

Both LP1000s and LP100s should be open to both commercial and noncommercial applicants. Whether service area populations or local businesses will support a commercial operation of an LPFM should not be prejudiced, nor the quality of their programming. A noncommercial interest of whatever persuasion should have the same opportunity to compete for an audience along with any commercial operator and to accept the attendant risks. If both noncommercial and commercial interest can apply for all LPFM channels, auctions can be legally avoided and lotteries should be possible. - Thomas M. Eells, Los Angeles, CA

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On Friday, April 23rd, the FCC has issued a Fact Sheet (No. 206-U) entitled:

REGISTRATION OF SOCIAL SECURITY NUMBERS IN THE UNIVERSAL LICENSING SYSTEM FOR AMATEUR RADIO OPERATORS

As part of its development of the Universal Licensing System (ULS), the Wireless Telecommunications Bureau will be converting the existing Amateur Radio Service database to the ULS. The ULS is an integrated database and automated processing system that will facilitate electronic filing of applications and electronic access to licensing information. To take full advantage of the features of ULS, including electronic filing, each user must register with the ULS. This Fact Sheet provides information on the registration process.

What is ULS registration?

Registration is the process of identifying yourself and your call signs (if applicable) to the ULS. By placing this information in the ULS, it can automatically be retrieved each time you file an application with the Commission. You do not need to hold an FCC license in order to register with the ULS.

Do I have to register to use ULS?

Yes, only registered users can file applications in ULS. If you are not registered in ULS, you will not be able to electronically file an application. Additionally, any manually filed application and any application filed by the Volunteer-Examiner Coordinator (VEC) on your behalf will be dismissed.

Note: First time applicants for an FCC license must also register prior to filing an application in ULS.

What do I get when I register?

Registration offers users a number of benefits, including:

- Ability to successfully file applications
- Electronic filing of license renewal applications
- Electronic Update of administrative license data (address, phone number, email address, etc.)

Additionally, you will receive a nine-character Licensee Identification Number when you register. This number will begin with the letter 'L' and be followed by eight digits. (See the "What security measures are you taking to keep my Social Security Number private?" section for more information).

When do I have to register?

You can register at any time. However, you do not need to register until the first time you intend to file an application after the current Amateur Radio Service database is converted to ULS. At that time, you must be reg-

istered prior to submitting any application in ULS. For most amateur radio operators, this will be when you modify your license (i.e., change your address, name, or call sign, or upgrade your class of operator license).

Additionally, if you are registered in ULS, you will not need to provide your Social Security Number to the VEC (see the "Do I have to provide my Social Security Number to the VEC?" section).

A Public Notice will be issued prior to converting the current amateur radio service database to ULS. This Public Notice will contain additional information regarding registration and licensing using ULS. Additionally, it will serve as notice of when the Commission will begin licensing the Amateur Radio Service using ULS.

What information do I have to provide?

You must provide your Social Security Number, as well as your name, mailing address, phone number, and any call sign for which you are licensed, regardless of radio service (for example, if you have an amateur service license and a license in one of the Private Land Mobile Radio services, you need to provide the call sign for both licenses). You may also provide a fax number and email address. The fax number and email address provided for registration will not be available to the public.

In addition, if you register electronically, you will need to enter a personal identifier and select a password. Your Social Security Number and password are needed to access ULS for electronic application filing.

Why are you collecting Social Security Numbers?

The *Debt Collection Improvement Act of 1996* requires all Federal agencies to collect Taxpayer Identification Numbers from all persons doing business with the agency. This includes all applicants for and recipients of a license. For most individuals, their Taxpayer Identification Number is their Social Security Number (see the "What if I don't have a Social Security Number?" section for more information).

ULS uses your Social Security Number as a unique identifier. The Social Security Number, along with your password, will provide access to the electronic filing features of ULS.

What if I don't have a Social Security Number?

If you are eligible for a Social Security Number, you must obtain one before using ULS. In general, all U.S. citizens and nationals and individuals admitted for permanent residence in the U.S. are eligible for a Social Security Number. For more information, contact the Social Security Administration at www.ssa.gov or by calling 1-800-772-1213 (TTY 1-800-325-0778).

If you are not eligible for a Social Security Number, you may be eligible for an IRS individual taxpayer identification number (ITIN). In general, if you are a nonresident

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alien who must file a U.S. tax return or can be named on someone else's U.S. tax return, you are eligible for an IRS individual taxpayer identification number. For more information, contact the Internal Revenue Service at www.irs.ustreas.gov or by calling 1-800-829-1040 inside the U.S. or 1-215-516-ITIN outside the U.S.

Note: The ULS Report and Order eliminated the requirement for aliens to obtain a reciprocal permit for alien amateur licensee to be the control operator of an amateur radio station at a place the FCC regulate the amateur service. Such reciprocal operating privileges are now authorized by rule. Therefore, aliens operating under the authority of section 97.107 of the Commissions rules (47 C.F.R. § 97.107) do not need to register with the ULS.

If you are not eligible for a Social Security Number or an ITIN, contact the ULS Technical Support Staff at (202) 414-1250 for assistance.

What security measures are you taking to keep my Social Security Number private?

The Commission has taken several steps to ensure the privacy of your Social Security Number:

Electronic registration on the Internet is accomplished using our secure web server or for an additional measure of security, you can register by connecting directly to the FCC's wide-area network.

Once registered, your Social Security Number will not be disclosed to the public. Instead, the ULS will generate a Licensee Identification Number to represent your Social Security Number. When retrieving queries, this Licensee Identification Number will appear on applications and licenses in any place where your Social Security Number would normally appear.

Do I have to provide my Social Security Number to the VEC?

No. For applications that the VEC is required to file on your behalf, you will have the option of providing either your Social Security Number or your Licensee Identification Number to the VEC. We are making this option available to amateur radio operators in response to the numerous comments received from the VEC's and amateur service licensees. To take advantage of this option, you must be registered in the ULS and know your Licensee Identification Number.

How do I register?

There are two ways to register for the ULS, electronically and manually

Electronic Filing

Internet - Point your web browser to www.fcc.gov/wtb/uls and click on the "TIN/Call Sign Registration button."

Wide-Area-Network (Extranet) - Establish a direct

connection to the FCC's wide-area-network by using the "Dial-up Networking" utility of Windows 95/98 to call 1-800-844-2784. Once this connection is established, launch your web browser, point it to wtbwww05.fcc.gov/wtb/uls, and click on the "TIN/Call Sign Registration" button. For more information on establishing a dial-up connection to the ULS, read the information provided in the "ULS Information Center" section of the ULS home page (www.fcc.gov/wtb/uls).

Manual Filing

You can file a paper application using FCC Form 606 (TIN Registration Form). This form can be obtained using one of the following methods:

- By downloading it from the web at www.fcc.gov/formpage.html
- By calling the FCC's Forms Distribution Center at 1-800-418-FORM (3676)

FCC Form 606 can be faxed (717-338-2693) or mailed back to the Commission:

Federal Communications Commission
Information Technology Division
Attention: Kathy McLucas
1270 Fairfield Road
Gettysburg, PA 17325-7245

I registered manually, how do I get my password?

If you registered manually, you will need to call the ULS Technical Support Staff at (202) 414-1250 to obtain a password. Once obtained, you can only change your password online using the TIN/Call Sign Registration utility. (See the "How to Register" section for information on how to access this utility.)

I registered manually, how do I get my Licensee Identification Number?

If you registered manually, the ULS still issued you a Licensee Identification Number. After the Amateur Radio Service is converted to ULS, you can obtain this number by using the system's license search tool to search for your call sign. The search result will show your Licensee Identification Number. Information on how to connect to the ULS can be found on the ULS home page (www.fcc.gov/wtb/uls).

Where can I get more information?

The FCC provides several resources for information on ULS:

- World Wide Web at www.fcc.gov/wtb/uls
- E-mail at ulcomm@fcc.gov
- Technical Support Staff at (202) 414-1250
- General Information at 1-888-CALLFCC (1-888-225-5322), then select option 2.

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launch multiple small size satellites into orbit. The launches will begin next year at a cost of \$8 to \$10 million for each satellite. [Tass News Agency].

COMPUTER INFO

The U.S. Patent Office issued over 150,000 patents in 1998. The company that earned the most was IBM (for the sixth straight year), with over 2,600 patents!

Lower PC prices and faster Internet access have combined to drive personal computer penetration to nearly 50 percent. A research study of 16,500 homes by Inteco Corp. of Norwalk, CT found 76 million adults use the Internet from home on a regular basis.

Some 51 million adults have access from work, 22 million from a friend's or relative's house and 24 million from a school, library or community center. And 108 million adults – about 55 percent of the total – had accessed the Internet at least once in the previous 30 days.

The research showed that of the 101.7 million households in the U.S., 37 percent are equipped for Internet access. This expands to 57 percent among households with incomes of \$50,000 a year of more.

The San Francisco Bay Area – the home of Silicon Valley – had the highest percentage of adults with Internet access – about 72 percent ...followed by Miami 67%, Houston 65%, Seattle/Tacoma 55% Washington DC and San Diego each had 64%, Cleveland/Akron 62%, Atlanta 61%, ...and Dallas and Philadelphia: each with 60%.

At the current rate, 65 percent of all U.S. households will have a PC by 2003 and 58% would be connected to the Internet. The research company believes that PC penetration will eventually top out at around 70 percent.

One estimate places 65% of the cost of a CRT monitor going towards the picture tube, and the other 35% toward the electronic circuitry and the plastic case. The average computer monitor contains over a thousand parts. A TV set costs about twice as much as its CRT.

Doctors can now scan bar codes on patient wristbands in hospitals. With a laptop computer, the doctor can

instantly call up the patient's latest medical history after scanning the wristband.

Lugging an expensive laptop computer on a business trip just to read e-mail is a burden. Sharp Electronics offers their Telmail TM-20, a handheld device with an acoustic modem that allows the user to attach any telephone for uploading and downloading e-mail. An LCD and keyboard let you read and write your messages. Its memory, however, is limited and it cannot receive attachments. You must also subscribe to the Pocketmail network, an e-mail service that costs about ten dollars a month.

Sony offers a laptop computer with a built-in video camera. Only one-sixth of an inch wide, the camera is mounted just above the color display. A full-color image can be captured from the camera and shown on the screen, and then stored onto disk. The Sony VAIO C1 PictureBook computer comes pre-loaded with Windows 98, a 4.3 gig hard drive and 64 MB of RAM. The PictureBook is not much larger than a paperback book.

Faster clock speeds in computers often means more power consumed. This keeps laptop computers from going as fast as desktops. But the next generation of Mobile Pentium III chips promises to ease the burden on laptops automatically. When the computer is plugged into the wall, the microprocessor runs at full steam -- 600 MHz. But when you switch to battery power, the chip slows itself down to 500 MHz. This extends the life of the laptop battery.

Video and computer monitors that do nothing but display repetitive information often suffer from phosphor burn. This is what creates the shadows of text and graphics visible on picture tubes when they're turned off. There is no way to fix it. But you can keep it from happening by using "screen savers," or programs that generate moving graphics on screen when the computer hasn't been used in a while.

But some applications require constant viewing and can't use screen savers. What to do? Use a device called an "orbiter." Often used on video monitors that display flight information at airports, an orbiter accepts a video signal and very slightly moves the image on the screen. The human eye can't detect it, but the text on screen slowly creeps from side to side, thus easing the burden on the picture tube's

phosphors. This technique was sometimes used on the early home video games.

Video conferencing is now available from the bottom of the world. Scientists in Antarctica often had to rely on radio to communicate with the rest of the world, but communications systems now allow them to use full-motion, real-time video with their compatriots back home.

Something for nothing department. Several companies are giving away fully loaded PCs (with monitor/modem/speakers/CD drives) or Internet access service in exchange for your viewing advertising ...or just subscribing to their Internet access service.

DirectWeb, a New Jersey based start up, will give a free "state of the art" home computer and software to people who sign up for their \$19.95 per month unlimited Internet access service. The PC has a 333 MHz Intel chip, 64MB memory, 6.4 gig hard drive, 15" monitor, 32X CD drive, 56K modem, speakers ...and more.

There are two other grade up PCs at \$29.95 (366 MHz Intel, 128 MB RAM, 8.6 gig hard drive, 17" monitor, etc.) and \$49.95 per month (Pentium III, 128MB RAM, DVD 6X, 17" monitor, 10.2 gig hard drive and an HP color printer) which includes unlimited Internet access.

Unlike "Free-PC" of Pasadena, CA <<http://www.free-pc.com>> which requires users to view ads, DirectWeb will make its revenue from Internet access fees and products that it will offer its online customers. Furthermore, DirectWeb said they will update the hardware every three years at no cost to the customer. Check out: <<http://www.directweb.com>>

DirectWeb is available now in the Philadelphia area and will be expanded to other markets within the next 90 days. A national rollout is planned for this fall.

Intersquid (Laurel, NJ) also offers a free PC in exchange for a 30 month agreement to use their Internet access service at \$29.95 per month. At the end of 30 months, they send you another PC and you keep the old one. Check: <<http://www.intersquid.com>>

Gobi, Inc., offers a free (300 MHz Intel chip) PC in exchange for a three year Internet access agreement at \$25.99 monthly. (<<http://www.gobi.com>>

NetZero <<http://www.netzero.com>> offers free Internet access in exchange for allowing a small advertising window on your

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CUTTING EDGE TECHNOLOGY

■ **Cold solder joints are a fact of life in consumer and industrial electronics.** Lead/tin solder is very soft and isn't meant to provide mechanical connections, just electrical. But aerospace electronics often make use of "hard" solders, which provide both a strong mechanical and electrical joint through the use of gold alloys. Such a solder recipe creates a much higher melting point, so different equipment is required to make use of it. As you may guess, it also costs more.

■ **Aerospace engineers are working on closed cockpits for aircraft.** The reason for this comes from high-powered lasers: if you can blind an enemy pilot with one, you don't need to shoot down his aircraft. This possibility becomes more likely by the day. Closing the windows and projecting images of the outside world from hull-mounted video cameras onto viewing lenses inside the pilot's helmet might do the trick.

■ **Lasers are being used to perforate computer printer paper.** Laser perforating does not create dust or loose fibers, and allows the paper to separate more easily. Lasers are also being used to cut adhesive labels while they're still attached to their backing. They can also cut cloth without fraying.

■ **An electronic baseball bat?** The Copperhead ACX is being touted as the world's first. Made by Active Control experts in New England, the Copperhead contains piezoelectronic elements to enlarge the bat's "sweet spot" -- the area in which little or no vibration passes into the batter's hand when the bat meets the ball. The normal vibration is absorbed by the piezoelectronic elements inside the bat and converted into heat energy. (Perhaps someone can develop a similar technique for protective athletic equipment to lessen injuries.)

■ **We may soon see athletes wearing health monitors that transmit biomedical information to their coaches and the TV networks.** Viewers at home could soon see on their screens how much power an athlete produces at various points throughout the competition, all thanks to a sensor/transmitter worn on the wrist or beneath the helmet.

■ **Optical-fiber transmission systems can suffer from dirty connections,** just as wire-based systems can. Optical engineers design into the system a certain amount of "crud," or loss of optical power, that the system can safely tolerate. Too much degradation, however, and the signal can't get through. That's why dust collecting in a fiber-optic network is such a headache.

Cleaning optical connectors usually meant digging out isopropyl alcohol and cotton swabs, but the latest technique cleans the connections for you. Just remove the optical connector, spray in the cleaner, and reconnect the cable. The act of spraying the cleaning fluid onto the optical surfaces carries away the contaminants.

■ **Jensen tools makes a network cable locator that lets you identify a particular line** with an RJ-45 connector. DataLite injects an electrical pulse into the cable, and you plug a special RJ-45 module into the patchpanel sockets until the module lights up.

■ **You will eventually be able to check your bank balance** or get directions to restaurants and movie theaters on your cellular phone. Research firm, Strategy Analytics (Boston, MA) says there will be 28 million mobile data users accessing "lifestyle accessory type information" by 2003.

■ **Incredible as it seems, some people still try to use gas pipes as a means of carrying electrical signals** -- a ground connection, for example. It doesn't take much of a spark to cause a natural-gas explosion that can level a house. Some gas companies therefore try to idiot-proof their delivery systems by installing "dielectric unions" -- non-metallic pipe fittings -- in their lines. This keeps the gas flowing, but prevents any electric current from doing so.

EMERGING COMMUNICATIONS

■ **Iridium, the 66 low-earth orbiting satellite constellation that began operation on Nov. 1, 1998** as the world's first global satellite phone and paging company has failed to meet its revenue, hardware and customer projections. Their CEO, Dr. Edward Staiano resigned on April 22nd amid reports of substandard handset quality, limited availability and

poor sales.

Based on commitments made to lenders, Iridium was forecast to have more than 50 thousand customers by now. But it has only about 7 thousand subscribers. Its shares are down 75 percent from its 52 week high and investors have filed suit against the firm. Iridium is 20 percent owned by Motorola.

■ **No more "Konnichi wa" from the car!** The Japanese government has just outlawed talking on a cellular phone while driving in an automobile in that country. Too many accidents caused by distracted drivers forced the change.

■ **The direct-to-home "satellite vs. cable" battle is heating up.** The DBS (direct broadcast satellite) industry now has about 10 million subscribers and believes it will have 20 million within 5 years ...about a 20 per cent penetration. DirecTV is the leader with about 5 million customers.

Satellite providers have long complained that the biggest obstacle to competing with cable is that they are not allowed to offer local stations. Congress is now finalizing a bill which would allow satellite broadcasters to offer local signals. The FCC wants to make the satellite industry more competitive since it no longer regulates cable rates.

Meanwhile, AT&T has been on a buying binge. It spent \$44 billion for TCI Telecable and plans to acquire MediaOne and its Road Runner interactive high-speed platform for another 58 billion. There is talk that Road Runner will be merged with AT&T's "@Home" broadband service.

■ **Sprint - the No. 3 U.S. long distance company - is taking a different approach.** They recently purchased a wireless cable company that allows them to bridge the gap between their network and end users without wires or cables.

■ **Big advertisers are not jumping on the High-Definition Television (HDTV) bandwagon as fast as they could be.** Most large corporations view HDTV as a solution looking for a problem and don't think it's worth the money to produce advertisements in that format. They do have a point; not that many consumers have purchased HDTV sets yet.

■ **Noting that there is a market to launch a potential 1,500 commercial satellites in the next few years,** Russia plans to use converted 100-ton RS-18 military intercontinental ballistic missiles to

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screen. Freewww.com <<http://www.freewww.com>> also offers free (?) Internet access for a one time set-up charge of \$119.90 with no monthly fees ever.

The "ZapMe!" Corporation <<http://www.zapme.com>> offers free PCs with 17" monitors and satellite-delivered educational programming to schools in exchange for allowing the kids to watch their advertising. The only requirement is that the PCs be used for a minimum of 4 hours daily. There seems to be "deals" everywhere.

The top man at Microsoft, Bill Gates, never finished college. Yet he has just donated \$20 million to the Massachusetts Institute of Technology (a school he did not attend) to help construct a new building for their computer science department.

INTERNET NEWS

Look for Australia to become a major power in Internet gambling. Lasseters Online, which bills itself as the "World's First Government Licensed and Regulated Casino" opened April 10th in Alice Springs in Australia's Northern Territory. See: <www.lasseters.com.au>. It took two years, \$5 million and 135 "man years" to develop the site.

They offer blackjack, roulette, draw poker, seven (\$1 to \$5) slot machines (with a payout of 92%) ...and "Sic-Bo" ...a "craps" like game played with three dice. Players do not pay any Australian gaming taxes on their winnings.

Australia has taken the position that if you can't beat 'em, join em by allowing only Government monitored (daily!) and regulated online casinos from which it collects taxes.

Crown Ltd, Australia's largest casino has already completed its online product development and is waiting for the state government in Victoria to make it legal. That could come next month.

Queensland and Tasmania could be next. Their state governments have already adopted legislation permitting legalized gambling on the Internet.

More colleges and universities are finding more uses for the Internet. Some professors prefer to videotape their lectures and post them on a web site for the students to download at a later time.

Students can learn from home and not have to fight car and foot traffic - or be late for class! Students can learn from one another via e-mail, and a class requirement may be to exchange information on a particular topic with other students via the Net.

The Lycos Radio Network launched on the Web on April 26th at <www.radio.lycos.com>. They have five radio channels: alternative, country, hip-hop, hot tracks and jazz. Lycos said they could have up to 50 channels operating within six months. Unlike other online music services, Lycos Radio will run video along with the music. The service will sell banner, audio and video advertising at \$75 to \$100 per thousand impressions ...7.5¢ to 10¢ each. Seems high to us!

And another brand new Internet broadcast radio site is WebRadio.com (Woodland Hills, CA) which works with Java-empowered browsers. It features radio stations from around the world. <www.webradio.com>

WASHINGTON WHISPERS

The FCC is investigating the \$3 billion "10-10" dial-around phone industry. These services allow callers to choose a long distance company for individual calls by "dialing around" their current long distance carrier. There have been complaints that charges by 10-10 services exceed those advertised.

Does a private (or public) e-mail letter that contains annoying content violate federal law? A section of the *Communications Decency Act of 1996* says it is a federal crime to transmit a "...communication which is obscene, lewd, lascivious, filthy or indecent with intent to annoy, abuse, threaten or harass another person."

ApolloMedia, the San Francisco owner of <www.annoy.com> believes the law violates free-speech and is therefore unconstitutional. Annoy.com lets people post their opinions anonymously to public officials. The site is well done but some of the content is very rough indeed!

A California district appeals court upheld the law after interpreting it to ban only obscene material ...defined as smut which portrays sexual activity in a disgusting manner. It was left to local juries to

determine - based on community standards - when indecent content crosses the line. ApolloMedia appealed that ruling.

By refusing to issue an opinion, on April 19th the U.S. Supreme Court, unanimously affirmed the lower courts ruling. Annoy.com says it will continue to do business.

Why do we keep running out of telephone numbers? Because every time a new phone carrier comes along, they request a block of phone numbers to offer their customers. The block can contain up to 10,000 numbers, even if the new carrier doesn't have anywhere near that many potential customers. The FCC wants the phone companies to share these blocks as the numbers are doled out, to stem the flood of new area codes being issued throughout the country.

AMATEUR RADIO

Swatch switches from ham bands to cyberspace. Due to protests from radioamateurs worldwide, the Swatch Watch Company of Switzerland canceled their satellite mission to promote their new Swatch "beat" time on the ham bands. (See *W5YI Report*, p. 1, May 1, 1999.) The satellite, built by French and Russian schoolchildren, would have broadcast promotional messages on the two meter ham band.

The satellite was launched by hand during a spacewalk by Frenchman Jean-Pierre Haigneré, FXØSTB and Russian Captain Viktor Afanasyev from the Russian Mir space station on Friday April 16th, but without its battery power.

A press release on the AMSAT-France bulletin board said Jean-Pierre Haigneré "...confirmed to radioamateurs that the micro satellite was off when he launched it during the EVA he performed Friday, April 16. He declared that 'he received instructions to do so for the satellite was carrying advertisements that did not comply with amateur regulations'."

AMSAT France said that right up to the last minute they were trying to convince the Swatch company to cancel the mission. Rather than publicly recognizing they were wrong, Swatch decided to kill the project and asked the cosmonauts not to activate the satellite, but to launch it anyway without the capability to broadcast on the two meter band.

The messages that were to have been

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broadcast on 145.815 MHz were instead later read by a Russian cosmonaut.

Swatch also published "beatnik's" messages on its website at <<http://www.swatch.com/beatnik>> adding "There has been a lack of understanding between us and some of you have been very aggressive regarding the transmission of these messages. It was a real shame!"

Swatch put a positive spin on the matter by issuing a statement that the batteries were taken out of the satellite and donated to the Mir spacecraft to run an important onboard printer.

Better double-check your new car's electrical system before you hook up your rig! Some automobile voltages have increased from 12 volts to 42 volts. Why? Ohm's Law. To reduce the size of the wires and cables inside the car (and therefore their weight), automotive engineers are experimenting with increasing the bus voltage to lower the current required. That requires less metal, thus saving fuel.

The FCC's Chief Ham Radio Enforcer, Riley Hollingsworth has sent formal Warning Notices to Miguel Espinosa, KD2CL of Miami, FL and Salustiano Rivero AC4PX of Miramar FL.

They were notified that their stations were monitored on April 12 and 22 deliberately interfering with an ongoing 40 meter Amateur Radio network operating on 7.110 MHz. Rivero is also charged with following the net to another frequency (7.125 MHz.) Both were given 20 days in which to respond to the allegations "...to assist us in determining what action to take...."

Susan Terrefgino, KB2SFH (Cranford, NJ) and William Browning, KE4BWS (Pendleton, SC) were also sent Warning Notices for allegedly engaging in deliberate and malicious interference to VHF repeater operations.

Salvadore Santos KF2VD (New York City), Johnny Bryant KB4KQI (High Point, NC) and Lowell Howell KF8CO (Huntsville, OH) were all ordered to re-take their General and Advanced Class examinations. Jaime Sanchez, W6RSR (Calimesa, CA) and Rusty Leewright, KE6UOE (Northridge, CA) must re-take their Technician Class examinations.

Mike J. Mustachio, KC2EUT has had his Technician Class operator license reinstated but only for a one year time period. The Borough of Hopatcong

(New Jersey) police had alleged that Mustachio had transmitted music on a police frequency on March 16th using a hand held transceiver that he had modified to operate on police channels.

After reviewing Mustachio's response and discussing the case with the Borough Police Department, FCC's Riley Hollingsworth has agreed to issue him a short term license that will expire on March 22, 2000. "If there are no further violations [the renewal] will be granted routinely for a normal license term."

We reported in our last newsletter that South Carolina amateur, Richard L. Whiten was the subject on an FCC investigation into his on-the-air operating habits. He is charged with broadcasting profanity/obscenity ...and intentionally interfering with other stations by playing recordings over the air.

On April 27th, FCC's Riley Hollingsworth forwarded "...tape recordings made of your Amateur station on November 22 and 26." Whiten must "...provide a full explanation of these transmissions, signed before a Notary Public, on or before May 20, 1999."

Hollingsworth said "This information will be used to determine what action to take in this matter and what action to take regarding the renewal of your Amateur radio license."

The ARRL Web Extra online magazine debuts September 1 on the League's new Members Only Web Site. It will be a totally new publication that will place emphasis on getting out the news fast ...complete with photos and sound. It will be free of advertising.

We recently received a newsletter from the Pakistan Amateur Radio Society (PARS) headquartered in Islamabad, its capital city. It was edited by M. Yunis. Chaudhry AP2MY. (E-mail address: ap2_my@hotmail.com)

He told how Amateur Radio in Pakistan, a country about a third the size of neighboring India, is regulated by the Pakistan Tele-Com, a department within the Ministry of Communications.

Amateur radio applicants must be at least 21 years old, disclose their proposed station equipment and antenna ...and submit to a security clearance. Those who pass the security clearance are administered a technical examination and Morse test.

"The 12 wpm Morse code exam for the sole class of amateur license is given by

an officer from the Pakistan Telecom Corporation."

Those who pass get an AP2 call sign. There is an annual license fee of 50 rupees (about \$2 U.S.) which can be extended for five years.

"...the greater majority of 120 million Pakistanis are unaware of the concept or the activities of amateur radio operators who now number around the 190 mark. Forty years ago (1959) there was just 10!"

There is only one (experimental) 2 meter FM (20 watt) repeater in Pakistan which operates on 145.650.

Controversial radio talk-show host and ham operator, Art Bell W6OBB pulled an April Fool's prank that deceived some of the nation's biggest media companies. On April 1st, the Art Bell web site was made to appear that it had been hacked by anti-NATO Serbian hackers. It headlined, "Beograd Hackers Rule!! We have your site!! ...and "The Yugoslav Citizens' Message To NATO War Criminals."

Actually the cyberwarfare was a fake posted by the Art Bell's own web team. MSNBC, the BBC, Newsbytes, the Drudge Report ...and others were either duped or questioned on the airwaves whether the site was actually hacked. It resulted in a lot of free publicity for the Art Bell talk show.

Battling from your desktop. Art Bell may have gotten the idea from the NATO 50th Anniversary information web-site <<http://www.nato.int>> which has been under constant cyberattack from Serbian PC users in Belgrade. The disruption began March 28th and the site is still operating very erratically.

A notice is now posted to the site stating "NATO disclaims any overall liability from any inappropriate, improper or fraudulent use of the information provided on this site." A NATO spokesman added "Our Internet machines are in no way linked to our classified NATO operations network, which has not been damaged."

The Fox Network reported that California resident, Richard Clark responded to the report that NATO's Web site had been attacked by Belgrade hackers by firing off an 'e-mail bomb' to www.gov.yu, the Yugoslav government's main Web site. On April 3 and 500,000 e-mails later, the site went down. It is now back up but runs VERY slowly.

The Clinton 1999 budget contains nearly \$1.5 billion to protect critical computer systems from cyber and other attacks.

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(LPFM Broadcasting - Continued from Page 2)

Minorities need fair and equal opportunities that this proposal may help provide. ...I do not believe the NAB should try to lock-out minorities by making claims that they have not proved before this commission. Please adopt the Proposed Rulemaking for Low-Power FMs and Microbroadcasting 1-10 watts. - Wayne Leon Yardley, N0UDQ, Golden City, MO.

The FCC's recent NPRM concerning Low Power FM is an issue of grave concern. It threatens the health of the radio industry, and it falls short of what is needed to accomplish the Commission's LPFM objectives.

How will removing interference protection and adding hundreds or perhaps thousands of radio stations to the FM band serve the public interest? If long established protection standards no longer exist, the certain degradation of current broadcast signals will result in a loss of service to listeners...

Will more women and minorities actually have the opportunity to become station owners? Perhaps, but if LPFM licenses are auctioned, these groups may find the same barriers to entry into radio ownership as they do now.

How can the FCC ensure that radio - the most local of all communication services - will be able to make a smooth transition to digital? The proponents of In-Band On-Channel digital radio have been developing their systems based on the current interference standards.

Are Pirates trustworthy? It is not likely that scoundrels will want to become good citizens. They will more likely find ways to circumvent FCC regulations as they do now, figuring the Commission will be too busy administrating LPFM and won't have time to investigate illegal pirate activities, and they are probably right.

Will the FCC have resources to handle the additional enforcement and administration responsibilities that will come with LPFM frequencies? Thousands of applications to process combining with awesome enforcement burdens can do nothing but impede the wellborn intentions of the Commission. - Kenneth L. Fearnaw, Gen. Mgr. - WOW 590AM 94.1FM. - Omaha, NE

I am in favor of the legalization of low-wattage FM radio transmitters... Current FCC regulations place an unfair burden on rural and small-town broadcasters, who have to raise far more money per capita than their urban counterparts to buy high power transmitters [that] have far more broadcast capacity than our small communities need. Low power stations offer an excellent opportunity to build community in our town, and to use the publicly-owned airwaves to exercise our first amendment rights. Why should only the wealthy have access to the air. Concerns about overcrowding the airwaves simply don't apply here, or in many other parts of rural and small town America. - Andy L. Leider, Red Lodge, MT

Low power FM puts first the needs only of its' owners. By opening the airwaves to so many additional signals, the integrity of existing broadcaster's signals will obviously be degraded or, in certain areas, lost entirely. Common sense says that if the listeners can't receive the signal, they can't hear it. Common sense says that if the signal degrades into annoying half music - half static, listeners will turn it off. That situation does NOT put the customer's needs first, and neither does this proposal. - Gabe Chenoweth, KMTS/KGLN, Glenwood Springs, CO

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We at Amherst Alliance encourage you, as strongly as we can, to continue pressing forward with re-legalization of Low Power Broadcasting (LPBC) and with reasonable, meaningful proposals for radio station divestiture. We are prepared to lobby Congress on these matters if such action should prove necessary. ...The Amherst Alliance ...has organized 18 active chapters from Florida to Alaska, formed several Committees and established weekly CyberMeetings of the Amherst Coordinators (equivalent to a Board of Directors.) URL: <<http://www3.imcnet/Amherst>>. - Don Schellhardt, J.D. - Waterbury, CT

We never appreciated the regulations, restrictions, burdensome paperwork and exorbitant fees that were placed on us as radio licensees. But now we can better appreciate the benefits of regulation - because we have gotten a look at the alternative - the frightful future the FCC envisions for FM radio. There's literally a radio station for every neighborhood ...no burdensome requirements to live with ...there is no commitment to the community required ...no experience is required (in fact, present owners need not apply) ...and best of all there is no way the FCC is going to be able to figure out if you are operating legally - so anything goes. Listeners will learn that radio programming is no longer a reliable source of credible information. For-profit opportunists will hit a community up for money and then run. Less ethical non-profit operators will use their new found tool to exploit, incite, and provoke the passions of listeners to further their own selfish agendas ...whatever they may be. ...We strongly urge the Commission to consider Low Power Radio Service on a case-by-case basis, applying the same stringent technical and ownership standards that it would for the introduction of any other FM radio station. - Sylvia and Donald Leutz, Clear Mountain Air Broadcasting Co., Twain Harte, CA

I am asking you to support [Low Power Radio], as it is important to all of us. This would provide a forum to many new voices and opinions that are now going unheard. This would give local neighborhoods an opportunity to promote local events and keep neighbors informed on local issues. It would also allow our local merchants to advertise in our local neighborhoods, without having to purchase expensive airtime from the Denver stations. As a local musician, I know, better than most people, how difficult it is for local talent to get on the air in the Denver-Boulder area. Unless you are signed with a major label, your music isn't played on most radio stations, and there is little hope of local musicians getting exposure. More important, it is difficult for radio listeners to hear a diversity of music, entertainment and opinions. Low Powered radio would be the ultimate in public participation on the public airwaves. - Cindy Wonderful, Littleton, CO

I would urge you to give serious consideration to placing all low-power FM actions on hold until and unless the many technical issues are resolved and rules are adopted for digital audio broadcasting ...another threat to local radio stations. American radio listeners depend on local broadcasters for important local news, weather and emergency bulletins, public affairs and public service programming. We should not be putting access to that programming at risk by bringing on-line a new, untested and technically infeasible radio service that is not driven by good public policy. - Bob May, Gen. Mgr., KSFM-FM, KXDA FM, Las Cruces, NM

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The [FM] band in this area is dominated by religious broadcasters and a state university. Even with the proposed changes, it is going to be hard to find a clear frequency [for our high school.] We had envisioned that our radio station would give information to the community on what is happening in their school system. In addition, we wanted to cover all the social events that give a small town its character. Basically, it was going to be a way for the school and community to bind itself together in some very special ways. Under present rules and regulations, we would be denied the opportunity to do this.

Why can our school and community be bombarded by so much broadcasting that isn't relevant but is denied a frequency to broadcast to the needs of its citizens? Shouldn't the needs of students and communities come before commercialization?

Everyday in America, teachers labor to inspire, instruct and educate our young people. Many of us feel we are fighting a losing battle when so much of the media presents a value system that degrades the quality of human character. - Robert Cameron, Republic High School, Republic, MO

The FCC is strained now to enforce the rules and regulations for the existing Radio and Television stations. There is NO way for the FCC with the current manpower, funding and field offices to: allocate, oversee construction, and most importantly police thousands of new FM radio stations in the country. The proposed rulemaking only offers the frequencies to persons that have NO broadcast ownership and many that may apply will have no knowledge of how to properly construct and operate a Broadcast station. This could be a technical disaster. ...I strongly urge you and your fellow commissioners to stop this action on Low-Power FM. - William Fritsch, Gen. Mgr. KBZQ-FM, Lawton, OK

The creation of low power radio stations will be a very beneficial aspect of community organizing. The stations would provide a much needed format ...to bring our communities together. This type of radio also gives citizens a voice in the community. - Wyatt Mime (Address not given.)

WMJS is minority owned. I am the female owner and operator of this 26 year old Calvert County, Maryland station. A low power part time FM station could operate out of someone's bedroom and not be required to pay for programming to serve the community or hire news reporters and news services. This could seriously undercut a legitimate radio station's advertising.

The competition is severe enough with local cable advertising, weekly publications, coupons, all kinds of printed throwaways, Internet ads plus an abundance of established AM and FM station sales reps running up and down the street hawking their wares. If we lose advertising to these new cheapie radio stations, our survival is threatened... - Ada E. Gollub, Gen. Mgr., WMJS - 92.7 FM, Prince Frederick, MD

Because the FCC has no right to regulate radio transmissions which do not cross state borders, they have no right to stop current so-called "pirate" stations from broadcasting. Fundamentally, the electromagnetic spectrum belongs to everyone. No agency has a right to say what we can or cannot do with a medium which is just as much a part of our existence as the air we breath. I would like you to keep these key principals in mind when you consider how to go about creating a low power radio

service. The less regulation, the better. The less licensing requirements in this area, the better. The less micro-management by your agency, the better. The more freedom by low power broadcasters to operate, the better. There should be in fact zero regulation in this area because you have no right to regulate in this area in the first place. But if you must act, act in a way that provides the most freedom to the low power broadcaster. - Jonathan C. Higbee, N7HGM, Cottonwood, UT

Here's the "keep it simple, stupid" low power FM solution on how the FCC can fully protect the integrity of the spectrum, provide new opportunities for non-commercial, community-oriented radio broadcasting with additional diversity in radio voices and program services. This solution would not require any new frequency allocations or frequency re-allocations and would not require any new FCC regulatory burdens. Best of all this solution should not result in any significant opposition from the NAB or Congress.

The "KISS" solution is for the Commission to authorize FCC amateur radio stations, if they so choose, to make non-commercial one way transmissions to the community, using existing UHF amateur frequency allocations, above 420 MHz.

The amateur radio frequencies above 420 MHz are seriously underutilized, on balance, in 99.9% of the United States. Amateur stations are licensed to an individual and licenses cannot be sold or transferred. Amateurs tend to be self-policing ...live in their local community [and] already have a diversity of radio voices. A signal from the typical amateur radio tower should cover most small communities. All that would be needed to receive an amateur radio transmission above 420 MHz is an inexpensive scanner radio. These radios are already widely owned and can be purchased in any Radio Shack type store.

To make this solution work, the FCC would only do three things.

1. Allow amateur radio FCC call sign ID's on the hour rather than every ten minutes.
2. Allow amateur radio one way transmissions to include community news, views and analog music content in the current amateur radio allocations above 420 MHz.
3. Allow one way transmission frequency coordination with generally accepted volunteer state amateur radio frequency coordinators.

This solution will likely see opposition by the American Radio Relay League. The ARRL may claim that amateur UHF bands are too congested. This is not true. The ARRL may claim that amateur radio is for public service. This is true and this is exactly the reason for this solution. The ARRL may claim that amateur radio is a hobby. This is true and all the better to not be held accountable to multi-state large corporate commercial interests.

I have held an amateur radio license for 40 years. My call sign is W0KIE. I was a U.S. Navy Communications Technician - radio branch with emphasis on Morse code reception. I am owner of the W0KIE Satellite Radio Network that airs programming on C band satellite, GE-1, Transponder 12, 5.7 narrow band audio. The network programming is aimed at the back yard dish owner and amateur radio operator. The majority of W0KIE Network listeners are amateur radio licensees and nearly all of them wish to obtain a low power FM license. Most of them do not have the thousands of dollars needed to pay for an expensive engineering study and then stand to lose it all in a FCC license lottery. - Mike Reynolds, W0KIE, Tulsa, OK